

## REMARKS

Claims 1 - 20 are pending, with claims 1 - 3, 5, 7, 10 - 12, 14 and 16 having been rejected and claims 4, 6, 8, 9, 13, 15, and 17 - 20 having been objected to. The Examiner is thanked for indicating the allowable subject matter of claims 4, 6, 8, 9, 13, 15 and 17 - 20. These claims have not been placed into a form so that they do not depend from a rejected claim at this time because it is believed that the rejected claims of the application should also be allowable over the prior art of record, as will be discussed below.

Claims 1 - 3, 5, 7, 10 - 12, 14 and 16 stand rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama et al. (U.S. 6,204,978). Reconsideration of this rejection is respectfully requested in that **Akiyama et al., contrary to the Examiner's interpretation, does form an intermediate image between the incident light refracting surface and the exit light refracting surface.** This image occurs at or near the surface R4 as shown in Fig. 4, which illustrates a cross-sectional view of a reflective optical system which is then represented by the (simplified) coaxial (transmissive) schematic diagram of Fig. 1, wherein input light is imaged onto the imaging surface 16. As shown in Figs. 1 and 4, within the light path between the surface R1 (Fig. 4) and the surface R16 (Fig. 4) an image is formed at or near the surface R4 (Fig. 4) since the rays converge to a point at or near the surface R4 and then begin to diverge. As discussed at column 13, line 47, the "last imaging surface" is at surface 16 (Fig. 1), implying that there is at least one imaging surface prior to the "last imaging surface 16".

As stated at col. 13, line 66 to col. 14, line 5,


"the image side principal point position of the first lens unit and the object side principal point position of the third lens unit become a relation conjugate to the second lens unit. This shows that if as shown in the lower portion of FIG. 1, the object point is put at the image side principal point position of the first lens unit, the image point is formed at the object side principal point position of the third lens unit."

Thus, the bottom portion of Fig. 1 relates to the positioning of the first lens unit 12, and the third lens unit 14, relative to the second lens unit 13 so that the image side principal point position of the first lens unit 12 is conjugated by the power of the second lens unit to the object side principal point of the third lens unit. However, as shown in the ray diagram of the upper portion of Fig. 1, wherein input rays from the left side of the page are incident onto the first lens unit 12, an intermediate image is formed between the first lens unit 12 and the second lens unit 13 at the position that the rays cross (i.e., come to a focus and begin to diverge). The combined optical power of the second lens unit 13 and the third lens unit 14 then refocuses the light at the "last imaging surface 16", as this surface is referred to at column 13, line 47.

Having pointed out that an intermediate image is indeed formed in Akiyama et al., it is respectfully requested that the rejection of claims 1 - 3, 5, 7, 10 - 12, 14 and 16 as being anticipated by Akiyama et al. be withdrawn, since Akiyama et al. fails to meet the limitation as contained in claim 1, lines 13 - 14, of the present application. Further, unless more pertinent prior art is found, an early Notice of Allowability is earnestly solicited.

Respectfully submitted,

ARNOLD INTERNATIONAL

By   
Bruce Y. Arnold  
Reg. No. 28,493

(703) 759-2991

P.O. Box 129  
Great Falls, VA 22066-0129